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CORRUGATED FIN

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TSW*
5 **BACKGROUND OF THE INVENTION**

1. FIELD OF THE INVENTION

[0001] The present invention belongs to a technical field of a corrugated fin for composite heat exchangers.

2. DESCRIPTION OF THE RELATED ART

10 [0002] A conventional corrugated fin corresponds to required heat release amounts of respective heat exchangers by making a fin width and a number of louver slats different between a condenser side and a radiator side. (For example, refer to Japanese Patent Laid-open No. Hei 10-253276.)

[0003] Regarding composite heat exchangers used particularly for motor vehicles, there
15 has been a demand to make thicknesses of a condenser and a radiator, which compose a composite heat exchanger, different according to diversification of size of cabin and diversification of required specification of cooling performance in an engine room. In this case, a corrugated fin should be made to have a different fin width between the condenser side and the radiator side. However, the conventional corrugated fin has such a problem in that, when the fin
20 widths of the corrugated fin integrally formed with the corrugated fin of the composite heat exchanger are made different from each other, an entire corrugated fin bend during a corrugating step due to a difference of residual stresses generated during a louver processing step due to a difference of number of louver slats is formed according to the fin width.

25 **SUMMARY OF THE INVENTION**

[0004] An object of the present invention is to provide a corrugated fin which integrally
has two types of fin widths respectively made different corresponding to two types of heat exchangers, with the corrugated fin being capable of preventing bending of the corrugated fin in
its entirety during a corrugating step thereof due to a residual stress generated during a louver
30 processing step.